

Final draft **ETSI EN 301 489-28** V2.1.1 (2024-09)



HARMONISED EUROPEAN STANDARD

**ElectroMagnetic Compatibility (EMC)
standard for radio equipment and services;
Part 28: Specific conditions for wireless digital video links;
Harmonised Standard for ElectroMagnetic Compatibility**

[ETSI EN 301 489-28 V2.1.1 \(2024-09\)](https://standards.iteh.ai/catalog/standards/etsi/9b70db09-dc1e-4eb3-a166-610ae7985240/etsi-en-301-489-28-v2-1-1-2024-09)

<https://standards.iteh.ai/catalog/standards/etsi/9b70db09-dc1e-4eb3-a166-610ae7985240/etsi-en-301-489-28-v2-1-1-2024-09>

ReferenceREN/ERM-EMC-395

Keywordsdigital, EMC, harmonised standard, radio,
regulation, video

ETSI650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - APE 7112B
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° w061004871

Important notice

The present document can be downloaded from the
ETSI [Search & Browse Standards](#) application.

The present document may be made available in electronic versions and/or in print. The content of any electronic and/or print versions of the present document shall not be modified without the prior written authorization of ETSI. In case of any existing or perceived difference in contents between such versions and/or in print, the prevailing version of an ETSI deliverable is the one made publicly available in PDF format on [ETSI deliver](#).

Users should be aware that the present document may be revised or have its status changed, this information is available in the [Milestones listing](#).

If you find errors in the present document, please send your comments to the relevant service listed under [Committee Support Staff](#).

If you find a security vulnerability in the present document, please report it through our [Coordinated Vulnerability Disclosure \(CVD\)](#) program.

Notice of disclaimer & limitation of liability

The information provided in the present deliverable is directed solely to professionals who have the appropriate degree of experience to understand and interpret its content in accordance with generally accepted engineering or other professional standard and applicable regulations.

No recommendation as to products and services or vendors is made or should be implied.
In no event shall ETSI be held liable for loss of profits or any other incidental or consequential damages.

Any software contained in this deliverable is provided "AS IS" with no warranties, express or implied, including but not limited to, the warranties of merchantability, fitness for a particular purpose and non-infringement of intellectual property rights and ETSI shall not be held liable in any event for any damages whatsoever (including, without limitation, damages for loss of profits, business interruption, loss of information, or any other pecuniary loss) arising out of or related to the use of or inability to use the software.

Copyright Notification

No part may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm except as authorized by written permission of ETSI.

The content of the PDF version shall not be modified without the written authorization of ETSI.

The copyright and the foregoing restriction extend to reproduction in all media.

© ETSI 2024.
All rights reserved.

Contents

Intellectual Property Rights	4
Foreword.....	4
Modal verbs terminology.....	5
1 Scope	6
2 References	6
2.1 Normative references	6
2.2 Informative references.....	7
3 Definition of terms, symbols and abbreviations.....	7
3.1 Terms.....	7
3.2 Symbols.....	8
3.3 Abbreviations	8
4 Test conditions	8
4.1 General	8
4.2 Arrangements for test signals.....	9
4.2.1 Arrangements for test signals at the input of transmitters.....	9
4.2.2 Arrangements for test signals at the output of transmitters.....	9
4.2.3 Arrangements for test signals at the input of receivers	9
4.2.4 Arrangements for test signals at the output of receivers	9
4.2.5 Arrangements for testing transmitter and receiver together (as a system).....	9
4.3 Exclusion bands.....	9
4.3.1 General.....	9
4.3.2 Receiver and receivers of transceivers Exclusion band.....	9
4.3.3 Transmitter and transmitters of transceivers Exclusion band	9
5 Performance assessment.....	10
5.1 General	10
5.2 Ancillary equipment.....	10
5.3 Assessment procedures.....	10
6 Performance criteria	11
6.1 General performance criteria.....	11
6.1.1 General.....	11
6.1.2 Choice of measurement device and QEF methods	11
6.2 Performance criteria for Continuous phenomena	11
6.3 Performance criteria for Transient phenomena	12
7 Applicability overview	12
7.1 Emission.....	12
7.1.1 General.....	12
7.1.2 Special conditions.....	12
7.2 Immunity	13
7.2.1 General.....	13
7.2.2 Special conditions.....	13
Annex A (informative): Relationship between the present document and the essential requirements of Directive 2014/53/EU	14
Annex B (informative): Change history	16
History	17

Intellectual Property Rights

Essential patents

IPRs essential or potentially essential to normative deliverables may have been declared to ETSI. The declarations pertaining to these essential IPRs, if any, are publicly available for **ETSI members and non-members**, and can be found in ETSI SR 000 314: "*Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards*", which is available from the ETSI Secretariat. Latest updates are available on the ETSI Web server (<https://ipr.etsi.org/>).

Pursuant to the ETSI Directives including the ETSI IPR Policy, no investigation regarding the essentiality of IPRs, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in ETSI SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

Trademarks

The present document may include trademarks and/or tradenames which are asserted and/or registered by their owners. ETSI claims no ownership of these except for any which are indicated as being the property of ETSI, and conveys no right to use or reproduce any trademark and/or tradename. Mention of those trademarks in the present document does not constitute an endorsement by ETSI of products, services or organizations associated with those trademarks.

DECT™, **PLUGTESTS™**, **UMTS™** and the ETSI logo are trademarks of ETSI registered for the benefit of its Members. **3GPP™** and **LTE™** are trademarks of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners. **oneM2M™** logo is a trademark of ETSI registered for the benefit of its Members and of the oneM2M Partners. **GSM®** and the GSM logo are trademarks registered and owned by the GSM Association.

Foreword

This final draft European Standard (EN) has been produced by ETSI Technical Committee Electromagnetic compatibility and Radio spectrum Matters (ERM), and is now submitted for the Vote phase of the ETSI Standardisation Request deliverable Approval Procedure.

The present document has been prepared under the Commission's standardisation request C(2015) 5376 final [i.3] to provide one voluntary means of conforming to the essential requirements of Directive 2014/53/EU on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment and repealing Directive 1999/5/EC [i.1].

Once the present document is cited in the Official Journal of the European Union under that Directive, compliance with the normative clauses of the present document given in table A.1 confers, within the limits of the scope of the present document, a presumption of conformity with the corresponding essential requirements of that Directive, and associated EFTA regulations.

The present document is part 28 of a multi-part deliverable. Full details of the entire series can be found in part 1 [1].

Proposed national transposition dates	
Date of latest announcement of this EN (doa):	3 months after ETSI publication
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	6 months after doa
Date of withdrawal of any conflicting National Standard (dow):	18 months after doa

Modal verbs terminology

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**need not**", "**will**", "**will not**", "**can**" and "**cannot**" are to be interpreted as described in clause 3.2 of the [ETSI Drafting Rules](#) (Verbal forms for the expression of provisions).

"**must**" and "**must not**" are **NOT** allowed in ETSI deliverables except when used in direct citation.

iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

[ETSI EN 301 489-28 V2.1.1 \(2024-09\)](#)

<https://standards.iteh.ai/catalog/standards/etsi/9b70db09-dc1e-4eb3-a166-610ae7985240/etsi-en-301-489-28-v2-1-1-2024-09>

1 Scope

The present document specifies the applicable test conditions, performance assessment and performance criteria for wireless digital video links operating in the frequency band 1,3 GHz to 50 GHz and the associated ancillary equipment, in respect of electromagnetic compatibility.

Technical specifications related to the antenna port and emissions from the enclosure port of the radio equipment are not included in the present document. Such technical specifications are found in the relevant product standard for the effective use of the radio spectrum, see table 1.

Table 1: Radio Technologies in scope of the present document

Technology	ETSI Standard
Wireless Video Links operating in the 1,3 GHz to 50 GHz frequency band	ETSI EN 302 064 [i.2]

Technical specifications related to conducted emission EMC requirements below 9 kHz on the AC mains port of radio equipment are not included in the present document.

NOTE 1: Such technical specifications are normally found in the relevant product family standards for AC mains powered equipment (e.g. EN IEC 61000-3-2/A2 [i.4] and EN 61000-3-3/A2 [i.5]).

NOTE 2: The relationship between the present document and essential requirements of article 3.1(b) of Directive 2014/53/EU [i.1] is given in annex A.

2 References

2.1 Normative references

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the referenced document (including any amendments) applies.

Referenced documents which are not found to be publicly available in the expected location might be found at <https://docbox.etsi.org/Reference/>.

NOTE: While any hyperlinks included in this clause were valid at the time of publication, ETSI cannot guarantee their long term validity.

The following referenced documents are necessary for the application of the present document.

- [1] [ETSI EN 301 489-1 \(V2.2.3\) \(11-2019\)](#): "ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements; Harmonised Standard for ElectroMagnetic Compatibility".